=> d 11L1 HAS NO ANSWERS L1STR

G1 0,S G2 [@1], [@2], [@3], [@4]

G3 S,Me

Structure attributes must be viewed using STN Express query preparation.

=> d his

L1

L7

(FILE 'CAPLUS' ENTERED AT 06:21:00 ON 21 AUG 2003) DEL HIS

FILE 'REGISTRY' ENTERED AT 06:27:09 ON 21 AUG 2003 STRUCTURE UPLOADED

L25 S L1

L3 170 S L1 FULL

145 S L3 AND CAPLUS/LC

L425 S L3 NOT L4 L5

0 S L5 AND CAOLD/LC L6

> FILE 'CAPLUS' ENTERED AT 06:31:00 ON 21 AUG 2003 71 S L3

RN184957-40-2 CAPLUS

CN 3H-Indolium, 2-[2-[4-[(2-aminoethyl)amino]phenoxy]-3-[[1,3-dihydro-3,3dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX

$$H_2N-CH_2-CH_2-NH$$

Me

Me

 $CH-CH$ 
 $CH-CH$ 
 $CH_2$ 
 $CH_2$ 
 $Me$ 
 $CH_2$ 
 $Me$ 
 $CH_2$ 
 $Me$ 
 $CH_2$ 
 $Me$ 
 $CH_3$ 
 $Me$ 
 $CH_4$ 
 $CH_2$ 
 $Me$ 
 $CH_2$ 
 $Me$ 
 $CH_4$ 
 $Me$ 
 $CH_4$ 
 $CH_4$ 
 $CH_5$ 
 $Me$ 
 $CH_4$ 
 $CH_5$ 
 $Me$ 
 $CH_5$ 
 $C$ 

IT 184957-40-2

RL: RCT (Reactant); RACT (Reactant or reagent) (platinum-based linkers prepn. for labeling bioorg. mols. for detection and diagnosis)

RN

184957-40-2 CAPLUS
3H-Indolium, 2-[2-[4-[(2-aminoethyl)amino]phenoxy]-3-[[1,3-dihydro-3,3-CNdimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

10/038,554 Page 1

CAPLUS COPYRIGHT 2003 ACS on STN ANSWER 55 OF 71

1996:366130 ACCESSION NUMBER:

DOCUMENT NUMBER: 125:99952

Photographic element with ether dye for near-infrared TITLE:

antihalation

Fabricius, Dietrich M.; Schelhorn, Thomas INVENTOR (S):

PATENT ASSIGNEE(S): E. I. Du Pont De Nemours and Company, USA

U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 195,068, SOURCE:

abandoned.

CODEN: USXXAM Patent

DOCUMENT TYPE: LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5519145	A	19960521	US 1994-225388	19940408
JP 07287346	A2	19951031	JP 1995-82178	19950407
US 5536626	A	19960716	US 1995-445455	19950531
PRIORITY APPLN. INFO.	:	•	US 1994-195068	19940214
			US 1994-225388	19940408

OTHER SOURCE(S):

MARPAT 125:99952

GI

A novel dye and photog. element comprising the dye are disclosed. AΒ is esp. useful as an antihalation dye in a photog. element. A particularly preferred embodiment is provided in a photog. element comprising an absorbing amt. of the dye having the general formula I wherein X1, X2 independently represents CR8R9, S, Se, NR10, CH=CH, or O; R1 and R2 independently represent alkyl of 1 to 10 carbons or substituted alkyl of 1 to 10 carbons; R3 represents a ring chosen from the set consisting of arom. rings of 6 or 10 carbons, substituted arom. rings of 6 or 10 carbons, heterocyclic rings and substituted heterocyclic rings; R4, R5, R6, and R7 independently represent hydrogen, alkyl of 1-10 carbons, substituted alkyl of 1-10 carbons; R8, R9 independently represent alkyl of 1-10 carbons, substituted alkyl of 1-10 carbons, arom. ring of 6 or 10 carbons, substituted arom. ring of 6 or 10 carbons; R10 represents alkyl of 1-10 carbons, substituted alkyl of 1-10 carbons, arom. ring of 6 or 10 carbons, substituted arom. ring of 6 or 10 carbons; Q represents a counterion; and n is an integer of 2 and 3.

TT 173536-21-5P 173536-23-7P 173536-25-9P 173536-27-1P 173536-29-3P 173536-30-6P

173536-32-8P 173536-34-0P 173536-35-1P

173536-37-3P 173536-40-8P 173536-41-9P

173536-43-1P 173536-44-2P 173536-46-4P

173536-49-7P 173536-50-0P 179028-69-4P

#### 179028-73-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. and use as near-IR antihalation dye for silver halide photog. films)

RN173536-21-5 CAPLUS

3H-Indolium, 2-[2-[3-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2ylidene) ethylidene] -2-(4-methoxyphenoxy) -1-cyclopenten-1-yl] ethenyl] -1,3,3trimethyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CN

CRN 173536-20-4 CMF C38 H41 N2 O2

CM2

CRN 37181-39-8 CMF C F3 O3 S

RN

173536-23-7 CAPLUS
3H-Indolium, 2-[2-[4-(2-amino-2-oxoethyl)phenoxy]-3-[(1,3-dihydro-1,3,3-CNtrimethyl-2H-indol-2-ylidene)ethylidene]-1-cyclopenten-1-yl]ethenyl]-1,3,3trimethyl-, chloride (9CI) (CA INDEX NAME)

● Cl -

RN

173536-25-9 CAPLUS 3H-Indolium, 2-[2-[3-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2ylidene) ethylidene] -2-[4-(ethoxycarbonyl) phenoxy]-1-cyclopenten-1yl]ethenyl]-1,3,3-trimethyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM1

CN

CRN 173536-24-8 CMF C40 H43 N2 O3

CM 2

CRN 37181-39-8 CMF C F3 O3 S

RN173536-27-1 CAPLUS

CN 3H-Indolium, 2-[2-[3-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2ylidene)ethylidene]-2-(4-formylphenoxy)-1-cyclopenten-1-yl]ethenyl]-1,3,3trimethyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM1

173536-26-0 CRN C38 H39 N2 O2 CMF

CM2

37181-39-8 CRN CMF C F3 O3 S

RN

173536-29-3 CAPLUS
3H-Indolium, 2-[2-[3-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2ylidene) ethylidene] -2-(4-sulfophenoxy) -1-cyclopenten-1-yl]ethenyl] -1,3,3trimethyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

10/038,554 Page 1

```
ANSWER 50 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:
                          1997:34059
                                     CAPLUS
DOCUMENT NUMBER:
                          126:57117
TITLE:
                          Methods for the production of platinum-based linkers
                          between labels and bio-organic molecules, for labeling
                          bio-organic molecules, for detecting biological
                          substances of interest and diagnostic test kits
                          Houthoff, Hendrik Jan; Reedijk, Jan; Jelsma, Tinka;
INVENTOR(S):
                          Van Es, Remco Maria; Van Den Berg, Franciscus Michiel;
                          Lempers, Edwin Leo Mario; Bloemink, Marieke Johanna
PATENT ASSIGNEE(S):
                          Kreatech Biotechnology B.V., Neth.; Houthoff, Hendrik
                          Jan; Reedijk, Jan; Jelsma, Tinka; Van Es, Remco Maria;
                          Van Den Berg, Franciscus Michiel; Lempers, Edwin Leo
                          Mario; Bloemink, Marieke Johanna
SOURCE:
                          PCT Int. Appl., 36 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:
                          Patent
                          English
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO. DATE
                             19961114
                                            WO 1996-NL198
     WO 9635696
                       A1
                                                              19960508
         W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT,
             LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
             SG, SI
         RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
             IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN
                             19961114
                                            CA 1996-2218815 19960508
     CA 2218815
                       AA
     AU 9657040
                       A1.
                             19961129
                                            AU 1996-57040
                                                              19960508
                       B2
     AU 724320
                             20000914
     JP 11505533
                       T2
                             19990521
                                            JP 1996-533965
                                                              19960508
     NZ 307633
                                            NZ 1996-307633
                             20000128
                                                              19960508
                       Α
     EP 1019420
                             20000719
                                            EP 1996-915218
                       A1.
                                                              19960508
     EP 1019420
                      В1
                             20030806
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
PRIORITY APPLN. INFO.:
                                         EP 1995-201197
                                                           A 19950509
                                         WO 1996-NL198
                                                           W
                                                              19960508
```

OTHER SOURCE(S): CASREACT 126:57117; MARPAT 126:57117

The present invention provides improved methods of producing platinum compds., which are very suitable for producing labeled substances, which can be used to detect specific mols. of interest. The platinum coordination compds. have two reactive groups of which one is replaced by a label and the other one can be replaced by a substance to be labeled. Prodn. of labeled substances is very much improved by selection of the right starting materials and producing the right intermediates. The efficiency of labeling is very much improved, thereby enabling the prodn. of labeling kits which are also a part of the present invention. The methods can be used for the detection of, e.g., various microorganisms and gene translocations/abnormalities.

IT 184957-40-2DP, complexes with platinum ethylenediamine
RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(platinum-based linkers prepn. for labeling bioorg. mols. for detection and diagnosis)

ANSWER 59 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1995:794888 CAPLUS

DOCUMENT NUMBER: 123:286528

TITLE: Preparation of infrared dye-marked nucleotides for

marking, detection, and sequencing of nucleic acids.

Muehlegger, Klaus; Hoeltke, Hans-Joachim; Birkner, Christian; Eltz, Herbert Von INVENTOR(S):

Boehringer Mannheim GmbH, Germany PATENT ASSIGNEE(S):

SOURCE: Ger. Offen., 7 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND DATE		APPLICATION NO.	DATE
DE 4326466	A1 19950	209	DE 1993-4326466	19930806
CA 2145405	AA 19950:	216	CA 1994-2145405	19940730
CA 2145405				
			WO 1994-EP2541	19940730
	FI, JP, KR,			
			B, GR, IE, IT, LU	, MC, NL, PT, SE
			AU 1994-74611	
AU 671928				
EP 663922	A1 19950	726	EP 1994-924305	19940730
EP 663922				
JP 07507576	T2 19950	324	JP 1994-506207	19940730
JP 2966524		25		
AT 186304	E 19991	.15	AT 1994-924305	19940730
ES 2140551	T3 20000	301	ES 1994-924305	19940730
US 6573374	B1 20030		US 1995-411761	
FI 9501630 NO 9501319	A 19950		FI 1995-1630	
NO 9501319	A 19950	105	NO 1995-1319	19950405
AU 9659424		19	AU 1996-59424	19960710
AU 682290	B2 19970:	25		
JP 11286498	A2 19991	19	JP 1999-12975	19990121
JP 3266865	B2 20020:	18		
RIORITY APPLN. INFO	.:	DE	: 1993-4326466 A	19930806
		JP	1994-506207 A3	19940730
		WO	1994-EP2541 W	19940730

OTHER SOURCE(S):

MARPAT 123:286528

GI

$$Q^{1} = R^{2}$$

$$Me$$

$$Me$$

$$Me$$

$$Me$$

$$CH_{2}) m$$

$$R^{3}$$

$$CH_{2}) m$$

$$R^{4}$$

AΒ Title compds. (I; B = residue of adenine, quanine, hypoxanthine, 7-desazaadenine, 7-desazaquanine, 7-desazahypoxanthine, 7-desaza-8-azaadenine, 7-desaza-8-azaguanine, 7-desaza-8-azahypoxanthine, thymine, cytosine, uracil; X = linking group; n = 4-20; Sig = fluorescent mol. having an excitation wavelength of 650-800 nM, e.g., Q1; R1, R2 = H; R1R2 = atoms to form a Ph ring; R3 = H, NHCS bond to B; R4, R5 = alkylsulfonyl with m = 3-5, or R4 = NHCS with m = 3-8), were prepd. Thus, 8-aminopentylamino-2'-desoxyadenosine-5'-triphosphate and anhydro-10,12-propylene-3,3,3',3'-tetramethyl-1,1'-bis(3-sulfobutyl)-11-(4isothiocyano) phenoxyindotricarbocyanine Na salt were kept in DMF with protection from light to give anhydro-10,12-propylene-3,3,3',3'tetramethyl-1,1'-bis(3-sulfobutyl)indotricarbocyanin-11-(4-amino)phenoxythiono-[8-(5-aminopentylamino)-2'-desoxyadenosine-5'-triphosphate] (IRD-dATP). This may be used as a substrate for T7 DNA polymerase (no details).

## IT 167847-81-6P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of IR dye-marked nucleotides for marking, detection, and sequencing of nucleic acids)

RN 167847-81-6 CAPLUS CN 3H-Indolium, 2-[2-[

3H-Indolium, 2-[2-[4-[2-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]ethyl]phenoxy]-3-[[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

### IT 167847-85-0

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of IR dye-marked nucleotides for marking, detection, and sequencing of nucleic acids)

RN 167847-85-0 CAPLUS

CN 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]ethylidene]-2-[4-(2-hydroxyethyl)phenoxy]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(3-sulfopropyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

● Na

L7 ANSWER 1 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

2003:545724 CAPLUS

DOCUMENT NUMBER:

139:102420

TITLE:

Cyanine dye for labeling of biomolecules

INVENTOR(S):

Narayanan, Narasimhachari

PATENT ASSIGNEE(S): SOURCE:

GI

Li-Cor, Inc., USA
U.S., 20 pp., Cont.-in-part of U.S. Ser. No. 143,153,

abandoned.

CODEN: USXXAM

DOCUMENT TYPE:

Patent

LANGUAGE:

English 12

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6593148 US 5571388 US 6086737 PRIORITY APPLN. INFO.	B1 A A	20030715 19961105 20000711	US 2000-520770 US 1994-204627 US 1995-500691 JS 1994-204627 A2 JS 1995-500691 A3 JS 1998-143153 B2 JS 1984-594676 A3 JS 1987-78279 B2 JS 1990-570503 A2	20000307 19940301 19950711 19940301 19950711 19980820 19840329 19870727 19900821
		. 1	JS 1990-632605 B1 JS 1991-763230 A3 JS 1991-799712 B1 JS 1992-860140 A2 JS 1992-950734 A3 JS 1993-18806 A3 JS 1994-275232 B2 JS 1994-288461 A2	19910920 19911126 19920330 19920924 19930217

AB The IR-fluorescent cyanine dye I for labeling of biomols. was disclosed. A synthesis starting with the Cl (in place of NCS) analog of I was described.

IT 166547-11-1

RL: TEM (Technical or engineered material use); USES (Uses)

(cyanine dye for labeling of biomols.)

RN 166547-11-1 CAPLUS

CN

3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-2-(4-isothiocyanatophenoxy)-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)

#### 3 Na

IT 560095-28-5P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (prepn. of cyanine dye for labeling of biomols.)

RN 560095-28-5 CAPLUS

CN 3H-Indolium, 2-[2-[4-(2-carboxyethyl)phenoxy]-3-[[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

CM

173536-28-2 CRN C37 H39 N2 O4 S CMF

CM2

CRN 37181-39-8 CMF C F3 O3 S

RN

173536-30-6 CAPLUS
3H-Indolium, 2-[2-[2-(4-carboxyphenoxy)-3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclopenten-1-yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, tetrasodium salt (9CI) (CA INDEX NAME) CN

●4 Na

RN 173536-32-8 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]-2-(4-methoxyphenoxy)-1-cyclopenten-1-yl]ethenyl]-1,1,3-trimethyl-, chloride (9CI) (CA INDEX NAME)

● Cl -

RN 173536-34-0 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]ethylidene]-2-(4-methoxyphenoxy)-1-cyclopenten-1-yl]ethenyl]-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-, inner salt, sodium salt, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 173536-33-9 CMF C52 H56 N2 O14 S4

CM 2

CRN 121-44-8 CMF C6 H15 N

RN 173536-35-1 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-1,1-dimethyl-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]ethylidene]-2-(4-methoxyphenoxy)-1-cyclopenten-1-yl]ethenyl]-1,1-dimethyl-3-(4-sulfobutyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

RN 173536-37-3 CAPLUS

1H-Benz[e]indolium, 2-[2-[3-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol2-ylidene)ethylidene]-2-[4-(ethoxycarbonyl)phenoxy]-1-cyclopenten-1yl]ethenyl]-1,1,3-trimethyl-, salt with 4-methylbenzenesulfonic acid (1:1)
(9CI) (CA INDEX NAME)

CM 1

CN

CRN 173536-36-2 CMF C48 H47 N2 O3

CM 2

CRN 16722-51-3 CMF C7 H7 O3 S

RN 173536-40-8 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]-2-[4-(ethoxycarbonyl)phenoxy]-1-cyclohexen-1-yl]ethenyl]-1,1,3-trimethyl-, chloride (9CI) (CA INDEX NAME)

• c1 -

RN 173536-41-9 CAPLUS

CN

1H-Benz[e]indolium, 2-[2-[3-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]-2-(4-formylphenoxy)-1-cyclohexen-1-yl]ethenyl]-1,1,3-trimethyl-, chloride (9CI) (CA INDEX NAME)

• c1-

RN 173536-43-1 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-1,1-dimethyl-7,9-disulfo-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]ethylidene]-2-(4-sulfophenoxy)-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-7,9-disulfo-3-(4-sulfobutyl)-, inner salt, hexasodium salt (9CI) (CA INDEX NAME)

#### ●6 Na

RN 173536-44-2 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[2-[4-(carboxymethyl)phenoxy]-3-[[1,3-dihydro-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-, inner salt, tetrasodium salt (9CI) (CA INDEX NAME)

HO<sub>2</sub>C-CH<sub>2</sub>

HO<sub>3</sub>S

Me Me Me

CH-CH

CH-CH

CH-CH

(CH<sub>2</sub>) 
$$_4$$
-SO<sub>3</sub>H -O<sub>3</sub>S-(CH<sub>2</sub>)  $_4$ 

#### •4 Na

RN 173536-46-4 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[2-(4-carboxyphenoxy)-3-[[1,3-dihydro-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-, inner salt, tetrasodium salt (9CI) (CA INDEX NAME)

HO3S

Me Me

CH— CH— CH— CH— CH

(CH2) 
$$_4$$
— SO3H  $_{}^{}$  -O3S— (CH2)  $_4$ 

#### 4 Na

RN 173536-49-7 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[4-(2-amino-2-oxoethyl)phenoxy]-3-[[1,3-dihydro-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)

$$H_2N-C-CH_2$$
 $H_2N-C-CH_2$ 
 $H_2N-C-C-CH_2$ 
 $H_2N$ 

#### ●3 Na

RN 173536-50-0 CAPLUS

CN 1H-Benz[e]indolium, 2-[2-[3-[[1,3-dihydro-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]ethylidene]-2-(4-sulfophenoxy)-1-cyclohexen-1-yl]ethenyl]-1,1-dimethyl-7-sulfo-3-(4-sulfobutyl)-, inner salt, tetrasodium salt (9CI) (CA INDEX NAME)

HO3S Me Me Me SO3H CH CH CH CH 
$$\frac{1}{1}$$
 CH CH  $\frac{1}{1}$  CH  $\frac{1}$  CH  $\frac{1}{1}$  CH

### ●4 Na

RN

179028-69-4 CAPLUS
3H-Indolium, 2-[2-[2-[4-(carboxymethyl)phenoxy]-3-[(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)ethylidene]-1-cyclopenten-1-yl]ethenyl]-1,3,3-trimethyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM1

CN

179028-68-3 CRN CMF C39 H41 N2 O3

CM

CRN 37181-39-8 CMF C F3 O3 S

RN 179028-73-0 CAPLUS
CN 1H-Benz[e]indolium, 2-[2-[3-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]-2-[4-(ethoxycarbonyl)phenoxy]-1-cyclohexen-1-yl]ethenyl]-1,1,3-trimethyl-, chloride, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 173536-40-8 CMF C49 H49 N2 O3 . Cl

• cl -

CM 2

CRN 104-15-4 CMF C7 H8 O3 S

10/038,554

2H-indol-2-ylidene]ethylidene]-2-[(4-sulfophenyl)thio]-1-cyclopenten-1yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, tetrapotassium salt (9CI) (CA INDEX NAME)

RN158498-55-6 CAPLUS

CN

3H-Indolium, 2-[2-[2-[(4-carboxyphenyl)thio]-3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclopenten-1yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, tetrapotassium salt (9CI) (CA INDEX NAME)

RN

158498-60-3 CAPLUS 3H-Indolium, 2-[2-[2-(4-carboxyphenoxy)-3-[[1,3-dihydro-3,3-dimethyl-5-CNsulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclopenten-1yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, tetrapotassium salt (9CI) (CA INDEX NAME)

### ●4 K

RN 158498-67-0 CAPLUS

CN 3H-Indolium, 2-[2-[2-[5-cyano-1,6-dihydro-2-hydroxy-4-methyl-6-oxo-1-(2-sulfoethyl)-3-pyridinyl]-3-[[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclopenten-1-yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, tetrapotassium salt (9CI) (CA INDEX NAME)

$$HO_3S-CH_2-CH_2$$
 $Me$ 
 $HO$ 
 $Me$ 
 $CH$ 
 $O_3S-(CH_2)_4$ 

# ●4 K

RN 158498-78-3 CAPLUS

CN 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-2-(4-sulfophenoxy)-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, tetrapotassium salt (9CI) (CA INDEX NAME)

●4 K

10/038,554 Page 1

```
ANSWER 36 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:
                         1999:405038 CAPLUS
DOCUMENT NUMBER:
                         131:60020
TITLE:
                         Novel dye-polysaccharide conjugates and their use as
                         diagnostic agents
INVENTOR(S):
                         Bosies, Elmar; Hein, Heinz-Michael; Reiter, Rudolf;
                         Josel, Hans-Peter
PATENT ASSIGNEE(S):
                         Roche Diagnostics GmbH, Germany
                         PCT Int. Appl., 36 pp.
SOURCE:
                         CODEN: PIXXD2
DOCUMENT TYPE:
                         Patent
LANGUAGE:
                         German
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
     PATENT NO.
                  KIND DATE
                                           APPLICATION NO. DATE
                            _____
                                           -----
     WO 9931183
                     A1
                            19990624
                                           WO 1998-EP8282
                                                            19981217
         W: CA, JP, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
                           19990811
                                                            19971217
     EP 934986
                       A1
                                           EP 1997-122248
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
     CA 2315207
                      AA
                            19990624
                                           CA 1998-2315207 19981217
     EP 1040168
                                           EP 1998-965849
                            20001004
                       A1
                                                            19981217
     EP 1040168
                            20021106
                       В1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI
     AT 227324
                      E
                            20021115
                                           AT 1998-965849
                                                          19981217
     ES 2187079
                       Т3
                            20030516
                                           ES 1998-965849
                                                            19981217
PRIORITY APPLN. INFO.:
                                        EP 1997-122248 A 19971217
                                        WO 1998-EP8282
                                                         W 19981217
OTHER SOURCE(S):
                         MARPAT 131:60020
AB
     Dye-polysaccharide or -cyclosaccharide conjugates are prepd. and used for
     detg. the glomerular filtration rate in humans. Thus, IR 780 iodide was
     treated with the reaction product of 4-HOC6H4CH2CH2CO2H and NaH to give a
     carboxy-functional bridged polymethine dye. The succinimidyl ester of the
     dye reacted with O-(3-aminopropyl)inulin to form a conjugate.
IT
     228100-96-7DP, conjugates with inulin
     RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST
     (Analytical study); PREP (Preparation); USES (Uses)
        (dye-polysaccharide conjugates and their use as diagnostic agents)
RN
     228100-96-7 CAPLUS
     3H-Indolium, 2-[2-[4-(2-carboxyethyl)phenoxy]-3-[(1,3-dihydro-3,3-
CN
     dimethyl-1-propyl-2H-indol-2-ylidene)ethylidene]-1-cyclohexen-1-
     yl]ethenyl]-3,3-dimethyl-1-propyl-, inner salt (9CI) (CA INDEX NAME)
```

#### IT 228101-18-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of dyes and their polysaccharide conjugates for use as diagnostic agents)

RN

CN

228101-18-6 CAPLUS 3H-Indolium, 2-[2-[3-[(1,3-dihydro-3,3-dimethyl-1-propyl-2H-indol-2ylidene) ethylidene] -2-[4-[3-[(2,5-dioxo-1-pyrrolidinyl)oxy]-3oxopropyl]phenoxy]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-propyl- (9CI) (CA INDEX NAME)

PAGE 1-A

REFERENCE COUNT:

12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 69 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

1992:513516 CAPLUS

DOCUMENT NUMBER:

117:113516

TITLE:

Substitution reactions of a nucleofugal group in

heptamethine cyanine dyes. Synthesis of an

isothiocyanato derivative for labeling of proteins

with a near-infrared chromophore

AUTHOR (S):

Strekowski, Lucjan; Lipowska, Malgorzata; Patonay,

CORPORATE SOURCE:

Dep. Chem., Georgia State Univ., Atlanta, GA,

30303-3083, USA

SOURCE:

Journal of Organic Chemistry (1992), 57(17), 4578-80

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE:

Journal

LANGUAGE:

English

GΙ

AB The reactions of dye I with MeONa, MeNH2, PhONa, PhSNa, PhSH, and 4-H2NPhSH to yield the corresponding derivs., hydrodechlorination of I in the presence of EtSNa or PhSNa/Ph2PH, and synthesis of the SCN-substituted I, a new reagent for ultratrace detection of proteins, are described.

IT 142743-88-2P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

Ι

(prepn. and reaction of, with sodium ethylsuflide or sodium phenylsulfide)

142743-88-2 CAPLUS RN

3H-Indolium, 1-ethyl-2-[2-[2-[(4-aminophenyl)thio]-3-[(1-ethyl-1,3-dihydro-CN3,3-dimethyl-2H-indol-2-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3dimethyl-, perchlorate (9CI) (CA INDEX NAME)

CM1

CRN 142743-87-1 CMF C40 H46 N3 S

CM 2

CRN 14797-73-0 CMF Cl O4

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Ι

ANSWER 67 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1994:56667 CAPLUS

DOCUMENT NUMBER: 120:56667

New near-infrared cyanine dyes for labeling of TITLE:

proteins

AUTHOR(S): Lipowska, Malgorzata; Patonay, Gabor; Strekowski,

Lucjan

CORPORATE SOURCE: Dep. Chem., Georgia State Univ., Atlanta, GA, 30303,

USA

SOURCE: Synthetic Communications (1993), 23(21), 3087-94

CODEN: SYNCAV; ISSN: 0039-7911

DOCUMENT TYPE:

Journal LANGUAGE: English

GI

- Isothiocyanato-functionalized cyanine dyes I (X = O, S) for labeling of proteins at amino groups are synthesized. The dyes and their adducts with ABamines show strong absorbance and fluorescence in the near-IR region of 750-850 nm.
- IT152111-86-9P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and deprotection of)

- RN
- 152111-86-9 CAPLUS
  3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-CN2-ylidene]ethylidene]-2-[4-[[(1,1-dimethylethoxy)carbonyl]amino]phenoxy]-1cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

Na

IT 152111-89-2P 152111-92-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. and near-IR spectra of)

RN 152111-89-2 CAPLUS

CN 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-2-[4-[[[[2-(1,1-dimethylethoxy)-2-oxoethyl]amino]thioxomethyl]amino]phenoxy]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

Na

RN 152111-92-7 CAPLUS

CN 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-

10/038,554

Page 3

2-ylidene] ethylidene] -2-[[4-[[[2-(1,1-dimethylethoxy)-2-(1,1-dimethylethoxy)]]]oxoethyl]amino]thioxomethyl]amino]phenyl]thio]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) INDEX NAME)

Na

IT 152111-88-1P 152111-91-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction with glycine ester)

RN

152111-88-1 CAPLUS 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-CN2-ylidene]ethylidene]-2-(4-isothiocyanatophenoxy)-1-cyclohexen-1yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, monosodium salt (9CI) INDEX NAME)

RN152111-91-6 CAPLUS

CN3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-2-[(4-isothiocyanatophenyl)thio]-1-cyclohexen-1yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, monosodium salt (9CI) INDEX NAME)

Na

IT 152111-87-0P 152111-90-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction with thiophosgene)

RN

152111-87-0 CAPLUS 3H-Indolium, 2-[2-[2-(4-aminophenoxy)-3-[[1,3-dihydro-3,3-dimethyl-1-(4-CNsulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

RN152111-90-5 CAPLUS CN

3H-Indolium, 2-[2-[2-[(4-aminophenyl)thio]-3-[[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

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L7 ANSWER 45 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:575537 CAPLUS

DOCUMENT NUMBER: 127:231448

TITLE: Functionalized Tricarbocyanine Dyes as Near-Infrared

Fluorescent Probes for Biomolecules

AUTHOR(S): Flanagan, James H., Jr.; Khan, Shaheer H.; Menchen,

Steve; Soper, Steven A.; Hammer, Robert P.

CORPORATE SOURCE: Department of Chemistry, Louisiana State University,

Baton Rouge, LA, 70803-1804, USA

SOURCE: Bioconjugate Chemistry (1997), 8(5), 751-756

CODEN: BCCHES; ISSN: 1043-1802

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:231448

AB The syntheses of 3 novel functionalized tricarbocyanine dyes are described. These dyes contg. isothiocyanate and succinimidyl ester functional groups are reactive toward primary amines and can be used as fluorescent probes for biol. pertinent compds. such as amino acids and functionalized dideoxynucleotides. The absorption and fluorescence maxima occur in the near-IR regin of the spectrum (770-820 nm). The succinimidyl ester proved to be very sensitive to hydrolysis and was generated in situ to label amino acids and alkyl amines. The isothiocyanates were less susceptible to hydrolysis and were conjugated using org. modified [40% (vol./vol.) acetonitrile] buffers to amino acids. A dye with an alkyl isothiocyanate moiety showed conjugation to amino-functionalized dideoxynucleotide triphosphates.

IT 160846-42-4P

RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)

(functionalized tricarbocyanine dyes as near-IR fluorescent probes for biomols.)

RN 160846-42-4 CAPLUS

CN 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]ethylidene]-2-[(4-isothiocyanatophenyl)thio]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(3-sulfopropyl)-, bis(inner salt), (E,E,E)-(9CI) (CA INDEX NAME)

Double bond geometry as shown.

# IT 195382-08-2P 195382-09-3P 195382-11-7P 195382-12-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(functionalized tricarbocyanine dyes as near-IR fluorescent probes for biomols.)

RN 195382-08-2 CAPLUS

CN 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]ethylidene]-2-[4-(2-isothiocyanatoethyl)phenoxy]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(3-sulfopropyl)-, inner salt, ion(1-), (all-E)-(9CI) (CA INDEX NAME)

Double bond geometry as shown.

RN 195382-09-3 CAPLUS

CN 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]ethylidene]-2-[4-[3-[(2,5-dioxo-1-pyrrolidinyl)oxy]-3-oxopropyl]phenoxy]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(3-sulfopropyl)-, inner salt, ion(1-), (all-E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

RN

195382-11-7 CAPLUS 3H-Indolium, 2-[2-[2-[(4-aminophenyl)thio]-3-[[1,3-dihydro-3,3-dimethyl-1-CN(3-sulfopropyl) -2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-1-(3-sulfopropyl)-, inner salt, ion(1-), (all-E)- (9CI) INDEX NAME)

Double bond geometry as shown.

RN195382-12-8 CAPLUS

3H-Indolium, 2-[2-[2-[4-(2-carboxyethyl)phenoxy]-3-[[1,3-dihydro-3,3-CNdimethyl-1-(3-sulfopropyl)-2H-indol-2-ylidene]ethylidene]-1-cyclohexen-1yl]ethenyl]-3,3-dimethyl-1-(3-sulfopropyl)-, inner salt, ion(1-), (all-E)-(9CI) (CA INDEX NAME)

Double bond geometry as shown.

ANSWER 35 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN

1999:714823 CAPLUS ACCESSION NUMBER:

132:102160 DOCUMENT NUMBER:

Development of near-infrared fluorophoric labels for TITLE:

the determination of fatty acids separated by capillary electrophoresis with diode laser induced

fluorescence detection

Gallaher, David L. Jr.; Johnson, Mitchell E. AUTHOR (S):

Department of Chemistry and Biochemistry, Duquesne CORPORATE SOURCE:

Univ., Pittsburgh, PA, 15230, USA

Analyst (Cambridge, United Kingdom) (1999), 124(11), SOURCE:

1541-1546

CODEN: ANALAO; ISSN: 0003-2654 Royal Society of Chemistry

PUBLISHER: DOCUMENT TYPE: Journal

LANGUAGE: English

Synthesis and characterization of a polymethine cyanine near-IR (NIR) ΆB fluorophoric label for the derivatization and detn. of fatty acids sepd. by capillary electrophoresis are described. The label contains an arom. amine functionality, which was used to form a covalent linkage with the analyte. Various linking chemistries are explored, including direct amine-acid condensation using dicyclohexylcarbodiimide (DCC) as a carboxyl activating group. Spectrofluorometry was used to probe the fluorescence efficiency of the label to assist in choosing a sepn. medium for capillary electrophoretic sepn. A nonaq. sepn. medium for capillary zone electrophoresis was used to provide high quantum efficiency for fluorescence and adequate soly. of fatty acid analytes. Diode laser-induced fluorescence detection following electrophoresis of a simple mixt. of labeled fatty acids shows the applicability of this method to biol. relevant carboxylic acid analytes.

IT 142743-87-1P

RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (prepn. and NMR and use as near-IR fluorophoric labels for detn. of fatty acids sepd. by capillary electrophoresis with diode laser induced fluorescence detection)

RN142743-87-1 CAPLUS

3H-Indolium, 1-ethyl-2-[2-[2-[(4-aminophenyl)thio]-3-[(1-ethyl-1,3-dihydro-CN3,3-dimethyl-2H-indol-2-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-3,3dimethyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS ANSWER 33 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:188738 CAPLUS

DOCUMENT NUMBER: 132:302697

Nonaqueous capillary electrophoresis of fatty acids TITLE:

derivatized with a near-infrared fluorophore Gallaher, David L., Jr.; Johnson, Mitchell E.

AUTHOR (S): CORPORATE SOURCE:

Department of Chemistry and Biochemistry, Duquesne University, Pittsburgh, PA, 15282-1530, USA

Analytical Chemistry (2000), 72(9), 2080-2086

CODEN: ANCHAM; ISSN: 0003-2700

American Chemical Society PUBLISHER:

DOCUMENT TYPE: Journal LANGUAGE: English

Satd. linear fatty acids, derivatized with a near-IR absorbing fluorescent AB dye, were sepd. in 100% methanol with 12.5 mM tetraethylammonium chloride added as a charge carrier. Sepn. at 380 V/cm was acceptable for acids that differed in length by a single carbon. The labeled linear fatty acids behaved as random coils in the nonaq. sepn. medium, as shown in a fit to a simple theor. expression. However, even in 100% methanol with a trimethylsilylated capillary, significant adsorption to the capillary wall occurred, which reduced resoln. and slowed the sepn. Addn. of water to the methanol medium caused significant differences in sepn. behavior of high mol. wt. acids (>C16). Addn. of a cetyltrimethylammonium bromide surfactant to the sepn. medium dynamically coated the capillary and greatly improved the sepn. The surfactant also interacted with the acyl tail, apparently causing it to collapse. Resoln. in an optimal sepn. medium (20 mM surfactant) ranged from 1.6 to 1.1, depending on chain length, and theor. plate heights were under 4 .mu.m (N > 105). Resoln. was more than adequate to sep. stearic (C18:0) from oleic (C18:1) acid, as well as other unsatd. C18 homologs.

TT 264915-22-2

SOURCE:

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (nonaq. capillary electrophoresis of fatty acids derivatized with near-IR fluorophore)

264915-22-2 CAPLUS RN

3H-Indolium, 2-[2-[2-[(4-aminophenyl)thio]-3-[(1-ethyl-1,3-dihydro-3,3-CN dimethyl-2H-indol-2-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-1-ethyl-3,3-dimethyl-, iodide (9CI) (CA INDEX NAME)

10/038,554 Page 1

```
ANSWER 14 OF 71 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:
                          2002:368351 CAPLUS
DOCUMENT NUMBER:
                           136:366118
                          Non-isotopic detection of osteoblastic activity in
TITLE:
                          vivo using modified bisphosphonates
INVENTOR (S):
                           Frangioni, John V.
PATENT ASSIGNEE(S):
                          Beth Israel Deaconess Medical Center, USA
                           PCT Int. Appl., 45 pp.
SOURCE:
                           CODEN: PIXXD2
DOCUMENT TYPE:
                           Patent
LANGUAGE:
                           English
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
     ______
                       _ _ _ _
                             _____
                                              _____
                      A2
                                            WO 2001-US51312 20011029
     WO 2002038190
                             20020516
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
              CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
              HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
              LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
         RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
              BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2002036683
                       A5
                            20020521
                                            AU 2002-36683
                                                                20011029
PRIORITY APPLN. INFO.:
                                           US 2000-244020P P 20001027
                                           WO 2001-US51312 W 20011029
                          MARPAT 136:366118
OTHER SOURCE(S):
     The present invention is directed to a non-isotopic methods for the in
     vitro and in vivo detection of hydroxyapatite-pos. cells and structures.
     The NHS ester of the near-IR fluorophore IRDye78 was conjugated with
     pamidronate disodium to make Pam78. Pam78 was used in near-IR
     fluorescence imaging of hydroxyapatite in hairless mice. As early as 15
     min post-injection, Pam78 uptake in the spine, ribs, paws, and knees could
     be detected above background, and by three hours, most bony structures
     were visible.
ТТ
     424821-77-2P
     RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
     PKT (Pharmacokinetics); PRP (Properties); SPN (Synthetic preparation);
     ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
        (Pam 78; nonisotopic detection of osteoblastic activity in vivo using
        modified bisphosphonates)
RN
     424821-77-2 CAPLUS
CN
     3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-
     2H-indol-2-ylidene]ethylidene]-2-[4-[3-[(3-hydroxy-3,3-
     diphosphonopropyl)amino]-3-oxopropyl]phenoxy]-1-cyclohexen-1-yl]ethenyl]-
     3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, pentasodium salt (9CI)
       (CA INDEX NAME)
```

$$H_{2}O_{3}P-C-CH_{2}-CH_{2}-NH-C-CH_{2}-CH_{2}$$
 $PO_{3}H_{2}$ 

Me

 $Me$ 
 $CH-CH-CH-CH-CH-CH_{2}$ 
 $CH_{2}O_{3}H_{2}$ 
 $CH_{2}O_{3}H_{2}$ 
 $Me$ 
 $CH_{2}O_{3}H_{2}$ 
 $Me$ 
 $CH_{2}O_{3}H_{2}$ 
 $CH_{2}O_{3}H_{2}$ 

●5 Na

IT 398142-13-7

RL: RCT (Reactant); RACT (Reactant or reagent) (nonisotopic detection of osteoblastic activity in vivo using modified bisphosphonates)

RN 398142-13-7 CAPLUS

CN 3H-Indolium, 2-[2-[3-[[1,3-dihydro-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-2H-indol-2-ylidene]ethylidene]-2-[4-[3-[(2,5-dioxo-1-pyrrolidinyl)oxy]-3-oxopropyl]phenoxy]-1-cyclohexen-1-yl]ethenyl]-3,3-dimethyl-5-sulfo-1-(4-sulfobutyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)

PAGE 1-A

Page 2

# PAGE 1-A

●3 Na